[0096] 54. A cell culture system comprising:

[0097] a. a host cell capable of producing rAAV;

[0098] b. a helper virus; and

[0099] c. a cell culture medium with an osmolality of 360 mOsm/kg or higher when measured immediately after the host cell is introduced into the cell culture medium.

[0100] 55. The cell culture system of claim **54**, wherein the cell culture medium has an osmolality of 375 mOsm/kg or higher.

[0101] 56. The cell culture system of claim **55**, wherein the cell culture medium has an osmolality of 400 mOsm/kg or higher.

[0102] 57. The cell culture system of any one of claims **54-56**, wherein the cell culture medium has an osmolality sufficient to produce a 20% reduction in total helper virus production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0103] 58. The cell culture system of any one of claims **54-56**, wherein the cell culture medium has an osmolality sufficient to produce a 30% reduction in total helper virus production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0104] 59. The cell culture system of any one of claims **54-56**, wherein the cell culture medium has an osmolality sufficient to produce a 40% reduction in total helper virus production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0105] 60. The cell culture system of any one of claims **54-56**, wherein the cell culture medium has an osmolality sufficient to produce a 50% reduction in total helper virus production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0106] 61. The cell culture system of any one of claims **54-56**, wherein the cell culture medium has an osmolality sufficient to produce at least a 50% increase in total rAAV production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0107] 62. The cell culture system of any one of claims **54-56**, wherein the cell culture medium has an osmolality sufficient to produce at least a 100% increase in total rAAV production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0108] 63. The cell culture system of any one of claims **54-56**, wherein the cell culture medium has an osmolality sufficient to produce at least a 150% increase in total rAAV production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0109] 64. The cell culture system of any one of claims **54-56**, wherein the cell culture medium has an osmolality sufficient to produce at least a 200% increase in total rAAV production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0110] 65. The cell culture system of any one of claims **54-64**, wherein at least one tonicifying agent is an ionic tonicifying agent.

[0111] 66. T The cell culture system of any one of claims **54-64**, wherein at least one tonicifying agent is selected from the group comprising: NaCl, KCl, $NaNO_3$, Na_2SO_4, Na_2HPO_4, NaH_2PO_4, $NaNO_3$, KNO_3, K_2SO_4, K_2HPO_4, KH_2PO_4, and KNO_3.

[0112] 67. The cell culture system of any one of claims **54-64**, wherein one tonicifying agent is NaCl.

[0113] 68. The cell culture system of claim **67**, wherein the concentration of NaCl in the cell culture medium is 4.5 g/L or higher.

[0114] 69. The cell culture system of claim **67**, wherein the concentration of NaCl in the cell culture medium is 6.5 g/L or higher.

[0115] 70. The cell culture system of claim **67**, wherein the concentration of NaCl in the cell culture medium is 7 g/L or higher.

[0116] 71. The cell culture system of claim **67**, wherein the concentration of NaCl in the cell culture medium is 7.5 g/L or higher.

[0117] 72. The cell culture system of any one of claims **54-71**, wherein the cell culture medium contains an ionic tonicifying agent at a concentration sufficient to produce at least a 50% increase in total rAAV production and a 20% decrease in helper virus production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0118] 73. The cell culture system of claim **72**, wherein the cell culture medium contains an ionic tonicifying agent at a concentration sufficient to produce at least a 100% increase in total rAAV production and a 30% decrease in helper virus production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0119] 74. The cell culture system of claim **72**, wherein the cell culture medium contains an ionic tonicifying agent at a concentration sufficient to produce at least a 150% increase in total rAAV production and a 40% decrease in helper virus production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0120] 75. The cell culture system of claim **72**, wherein the cell culture medium contains an ionic tonicifying agent at a concentration sufficient to produce at least a 200% increase in total rAAV production and a 50% decrease in helper virus production compared to a host cell incubated in a medium with an osmolality of 266 mOsm/kg.

[0121] 76. The cell culture system of any one of claims **54-64**, wherein the tonicifying agent is a non-ionic tonicifying agent.

[0122] 77. The cell culture system of claim **76**, wherein the tonicifying agent is a sugar.

[0123] 78. Then cell culture system of claim **77**, wherein the tonicifying agent is a disaccharide.

[0124] 79. Then cell culture system of claim **78**, wherein the tonicifying agent is selected from the group consisting of sucrose, fructose, glucose, galactose, mannose, maltose, and trehalose.

[0125] 80. The cell culture system of claim **79**, wherein the tonicifying agent is sucrose.

[0126] 81. The cell culture system of claim **80**, wherein the concentration of sucrose in the cell culture medium is 6.8 g/L or higher.

[0127] 82. The cell culture system of claim **80**, wherein the concentration of sucrose in the cell culture medium is 13.7 g/L or higher.

[0128] 83. The cell culture system of claim **80**, wherein the concentration of sucrose in the cell culture medium is 29.4 g/L or higher.

[0129] 84. The cell culture system of claim **80**, wherein the concentration of sucrose in the cell culture medium is 41.1 g/L or higher.

[0130] 85. The cell culture system of any one of claims **54-84**, wherein the cell culture medium is a serum-free cell culture medium.